

UTAH DEPARTMENT OF TRANSPORTATION

TRAFFIC OPERATIONS CENTER

MONTHLY REPORT **JULY 2004**

2060 South 2760 West, Salt Lake City, UT 84104
 Phone: 887-3700 Fax: 887-3797 commuterlink.utah.gov



Field Devices Summary

Freeway Closed Circuit Television (CCTV)	189
Surface Street CCTV	44
Dial-up CCTV	32
Total CCTV	265
Freeway VMS	45
Surface Street VMS	17
Portable VMS	2
Total VMS	64
HAR (6 deployed, 5 portable units)	11
TMS	243
RWIS	43
Connected Traffic Signals (includes closed loop)	700
Connected Ramp Meters	23



I-15 Layton Hills Camera now on Fiber

Operations Summary

VMS Messages Displayed	834
Signal Timing Calls	53
Signal Maintenance Calls	237
New Work Orders	399
Incident Responses	799
Website Visitor Sessions	100,046
511 Calls	16,523
Email Alerts Sent	265
Weather Desk Calls	76
CommuterLink Questions	16

KUDOS!

“There are often complaints about our government but we just had a very pleasant experience. We noticed the traffic signal malfunctioning at 1460 West North Temple and it was an inconvenience. We called the Utah DOT and were treated in a friendly and professional manner and even asked if we wanted a follow up call. One day later, we received a follow up phone call that was again courteous and friendly informing us that the traffic signal was repaired!! Government can and does work sometimes!!”

Peter M. and Grace C. Byrne
Salt Lake City

TOC Employee of the Month



Troy Noall – Traffic Signal Specialist


TOC Mission

1. To Support UDOT and the Department of Public Safety in Improving Highway Safety.
2. To Help Provide Reliable and Efficient Travel.
3. To Provide Useful and Timely Real-time Traffic Information.
4. To Work Together with Other Government Agencies to Serve the Public.
5. To Provide Excellent Customer Service.

ACTIVITY HIGHLIGHTS

TOC Activities

This Month

1. A coordinated effort between Region 2, the TOC, and Salt Lake City Police helped to make the 4th of July Celebration at Sugarhouse Park a success. Ritchie Taylor and Mark Taylor worked with Sergeant Brian Purvis of the Salt Lake City Police Department to move the crowds from Sugarhouse Park across 1300 East and 2100 South to their vehicles and other mass transit vehicles. Two stages were employed in the exodus of the public from the Park. First, the traffic signals were remotely set to flash. Sergeant Purvis coordinated this with his officers and then notified UDOT when it was time to move to the next stage. Secondly, coordination plans were run on eastbound and westbound 2100 South, and northbound and southbound on 1300 East. The plan and the coordination between UDOT and Salt Lake City Police worked very well, and a similar approach will be used next year.
 2. "White knights of interstate help keep traffic moving," is the title of an article that Deseret Morning News printed featuring the Region 3 Incident Management Team (IMT). The article gave an in depth look at what the 3-man IMT crew does (including what their vehicles carry), and the accomplishments that they have made since they began work in Region 3 two years ago. One of the most notable accomplishments is a reduction in accident clearance times by 40%. The Region 3 Team, as well as Regions 1 and 2 Teams, help to keep our roadways clear and safe. For the complete article see Deseret Morning News for August 10th, 2004 or <http://deseretnews.com/dn/view/1%2C1249%2C595083100%2C00.html>.
- A white pickup truck with "INCIDENT MANAGEMENT" written on the side, parked in front of a building. The truck is a white cab with a white box body. The words "INCIDENT MANAGEMENT" are printed in black on the side of the box. There are some orange lights on the roof of the box. The truck is parked on a paved surface in front of a light-colored building with a dark doorway.
- Incident Management Vehicle
3. The new contract for hosting the 511 system has been awarded to Convergys. They will be migrating the existing 511 system over to their facilities by December of 2004. Several enhancements are scheduled to come on-line when the system migrates, including real-time TRAX information and bus schedules from UTA. Other enhancements will be introduced 6 months after the initial migration.
 4. The operations staff experimented with 24-hour operations. TOC intern, Philip Miller, responded to incidents and construction demands during the hours of 11:00 PM to 5:00 AM. This was the first of two separate weeks in which the TOC planned to experiment with these hours. Initially, contractors were to make joint repairs on I-15, but work was cancelled due to inclement weather. The majority of major incidents that occurred during this shift were carryover incidents from normal operating hours. Construction crews will also be notified that the control room will be overnight during the week of August 16th, allowing them to adjust the posted VMS as their closures change during the night.
 5. The Computer Aided Dispatch (CAD) - ATMS Integration Field Operational Test (FOT) project passed the integration test and is now in acceptance testing. The integration test assured that the Department of Public Safety CAD communicated with the CommuterLink incident management software. Acceptance testing assures the stability and functionality of the CAD FOT over an extended period of time. Other agencies including Valley Emergency Communications Center (911), Salt Lake City Police Dispatch, Salt Lake City Fire Dispatch, and Utah Transit Authority Dispatch are expected to start coming online in September.

ATMS Improvement and Expansion Activities

The following is a list of many of the projects that have either been completed, or are currently underway:

Region 1:

- Crews brought fifteen (15) Region 1 CCTV cameras online. Thirteen (13) cameras were part of the Legacy Parkway Project, and two other dial-up cameras on I-15 at 200 North in Kaysville and at Hill Field Road in Layton were also connected to fiber. These cameras are configured in the ATMS and CommuterLink system, available for Operators to use and CommuterLink website visitors to view.
- Two video feeds are now available at the Region 1 Headquarters building. Crews installed one (1) monitor and digital video decoder in the lobby of the building, which now displays a scrolling video sequence of Region 1 cameras. A second monitor and decoder were installed for the Region 1 Traffic Engineer's to utilize for operational purposes. Region 1 can select any of the CommuterLink cameras for viewing, including existing analog cameras or the new digital cameras.
- The Plymouth and Tremonton RWIS sites have been commissioned and are now providing data to the TOC. These RWIS stations will provide weather data for northern Utah, which will allow TOC meteorologists to prepare better for incoming storms.

Region 2:

- Hub 4 has been converted to the IP over Ethernet architecture. Currently all port servers used to communicate with traffic signals have been placed in the Hub and are connected directly to the fiber modems. Eventually all port servers and necessary equipment will be placed in the cabinets. While new Hubs have had IP equipment installed from the beginning, Hub 4 is the first of all Hubs running on a Synchronous Optical Network (SONet) to connect traffic signals using this architecture.
- 10 cameras along Bangerter Highway have been placed on the CommuterLink website. These cameras have been available to operations staff at the TOC since January, and are now available to the traveling public.

Region 3:

- A Draft Commercial Vehicle Crash Analysis Study on US-6 was released in July. This study presents data on vehicle crashes with specific emphasis on Truck Crashes. Several locations were identified where rollover and runoff problems have been occurring. Several different curve warning systems were reviewed and recommendations were presented to pursue the implementation of two dynamic curve warning systems using dynamic message sign and radar. Several individuals from the TOC and Motor Carriers observed the Commercial Vehicle Rollover Warning System that was deployed on I-70, near Grand Junction, Colorado. A concept report for the implementation of this system is currently being developed.
- Work is being done to secure the inclusion of the ATMS in a proposed widening project on I-15 from the Alpine Interchange to the University Parkway Interchange. The extension of the inside median in both directions of the freeway will make way for an HOV lane. At this time, work is being done to identify a means to fund the project. The inclusion of the ATMS in this project would extend the ATMS backbone south on I-15 to the University Parkway Interchange, providing the means to connect 6 CCTV cameras currently running on wireless to fiber.

Region 4:

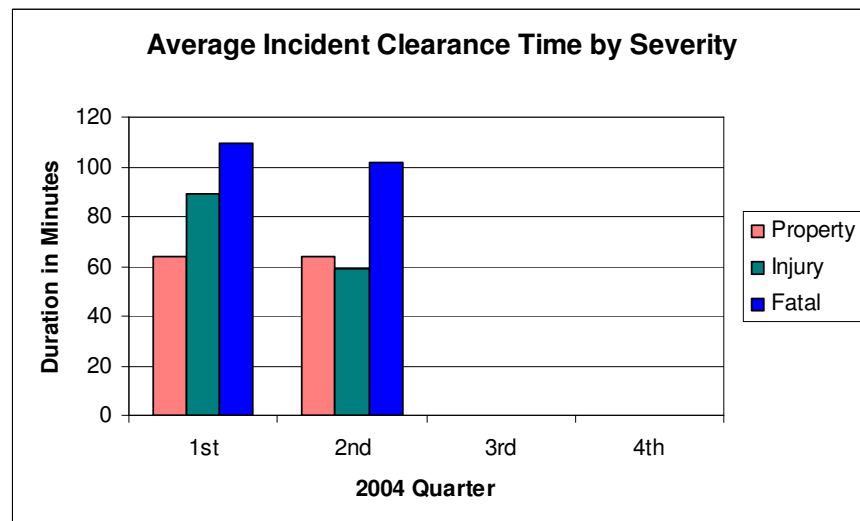
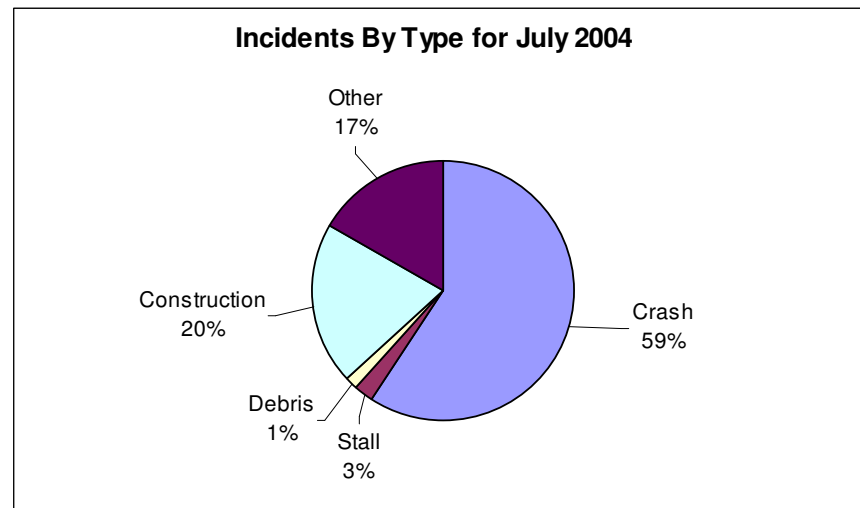
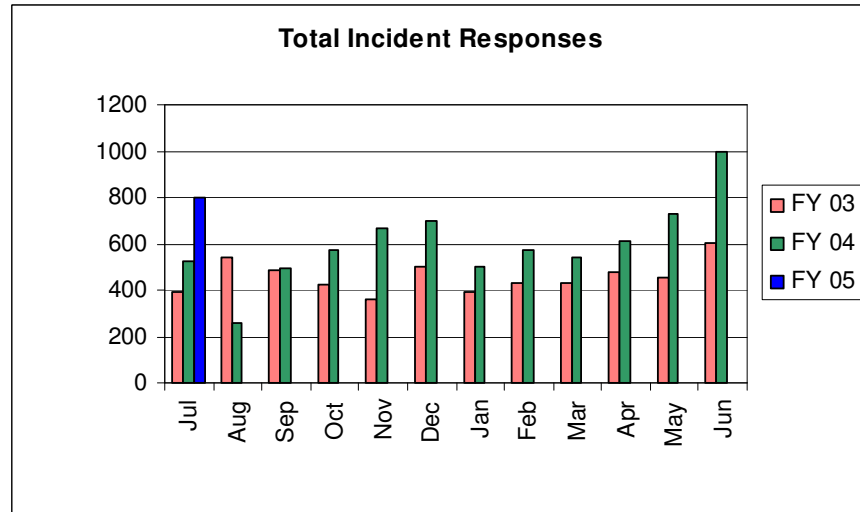
- Design has begun for the reconstruction of St. George Blvd. This project will include a fiber optic interconnect, which will include 4 CCTV cameras and video detection for traffic signals along this corridor. Upon completion of this project, traffic signals along St. George Blvd. will be switched from canopy wireless radios to fiber.

Acronyms

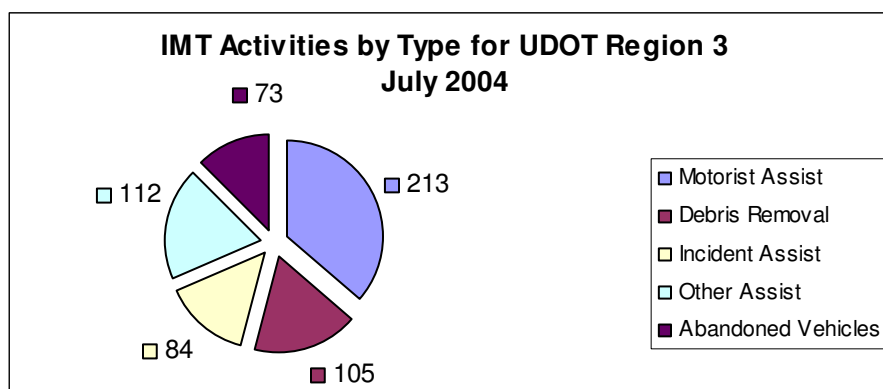
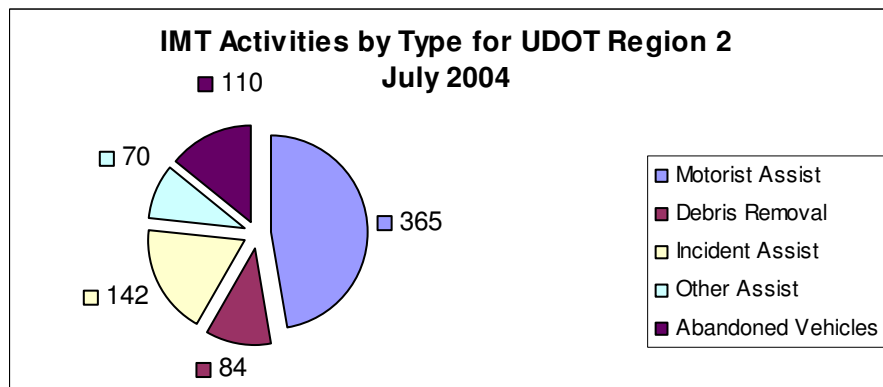
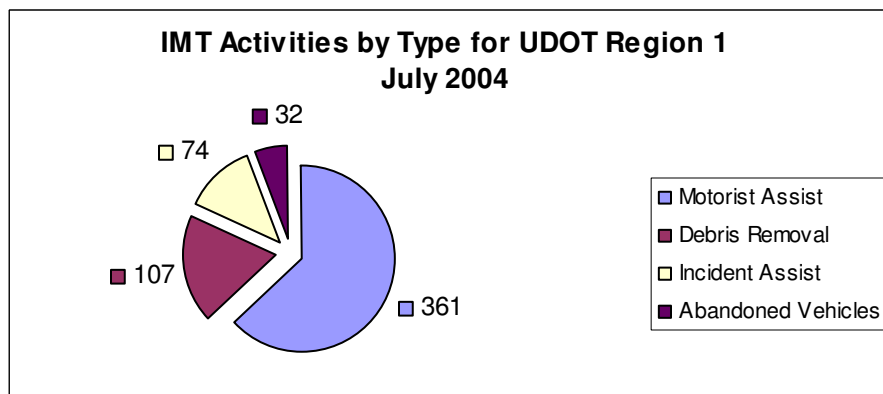
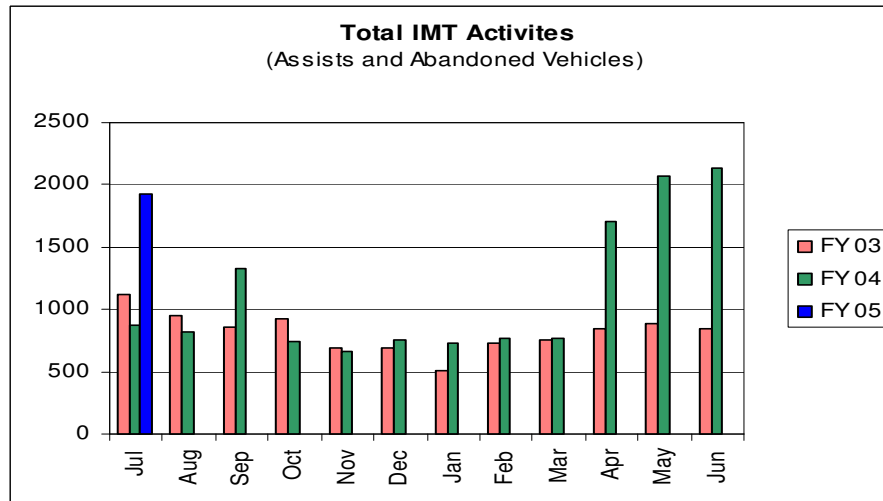
ATMS	Advanced Traffic Management System	TMS	Traffic Monitoring Station (count station)
CCTV	Closed Circuit Television	TOC	Traffic Operations Center
DPS	Department of Public Safety	TTI	Travel Time Index
HAR	Highway Advisory Radio	VMS	Variable Message Sign
RWIS	Road-Weather Information System	i2TMS	Integrated Interagency Traffic Management System

Safety

An incident response occurs each time an incident is recorded in the ATMS system. These can be of several types, including crash, construction, debris, stall, congestion, or other. Crashes are separated into three subcategories: property damage, personal injury, and fatal. Each time an incident is created, information is sent to the 511 system, the website, and to the public through email alerts. An incident remains active until it has been completely cleared from the roadway.



Incident Management Team (IMT) Activities



Freeway Traffic Level of Service

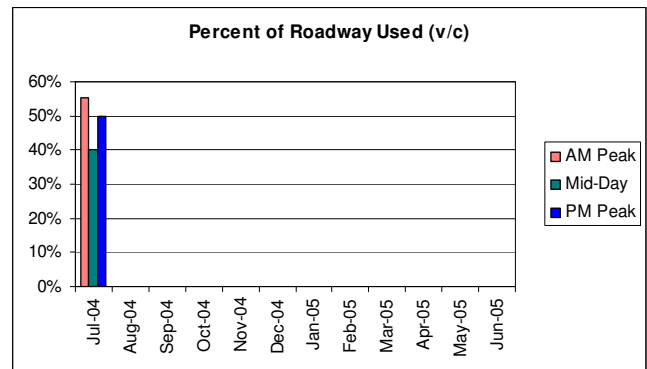
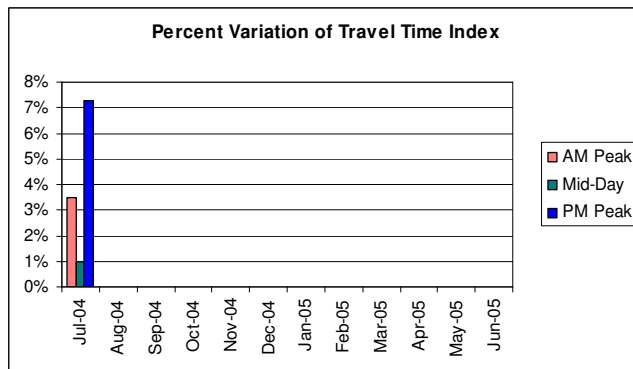
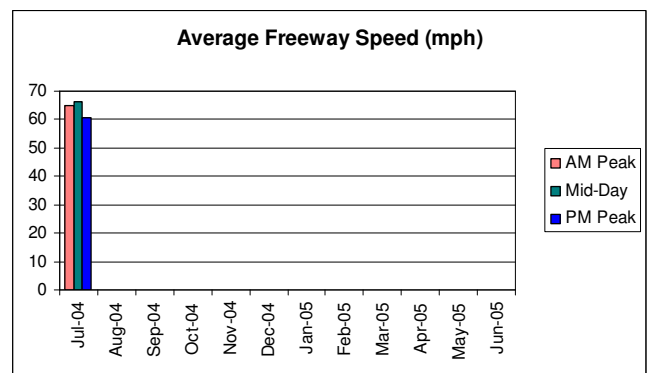
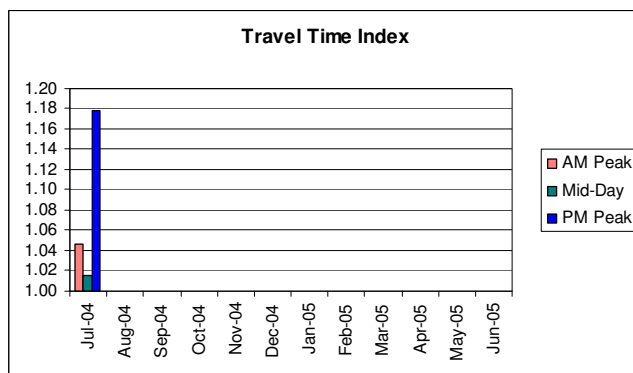
Freeway flow measures are taken from the Traffic Monitoring Stations (TMS) located throughout the Salt Lake Valley. As more TMS sites are installed throughout the state, they will be included in these performance measures.

Travel Time Index: This measure of mobility is based on freeway speeds and is weighted by segment lengths and by the traffic volume. A value of 1.0 represents free-flow speeds. A value of 1.12 indicates that the average vehicle trip takes 12% longer than if that were the only vehicle on the freeway.

Percent Variation of Travel Time Index: The percent variation in the Travel Time Index is a measure of how much the Travel Time Index changes from day-to-day.

Average Freeway Speed: The freeway speed is weighted by volume.

Percent of Roadway Used: The percent of roadway used is the ratio of the volume on the segment to its capacity. This is otherwise known as the volume to capacity ratio, or (v/c).



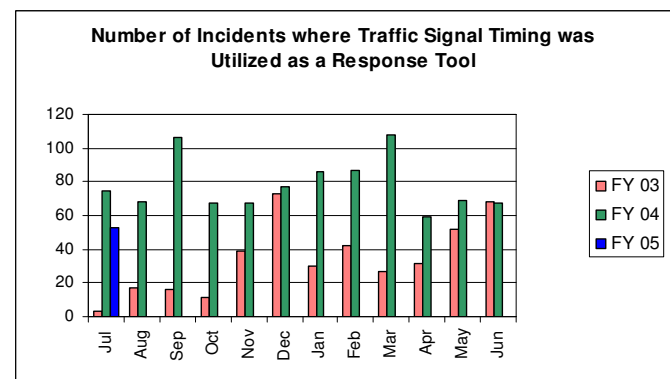
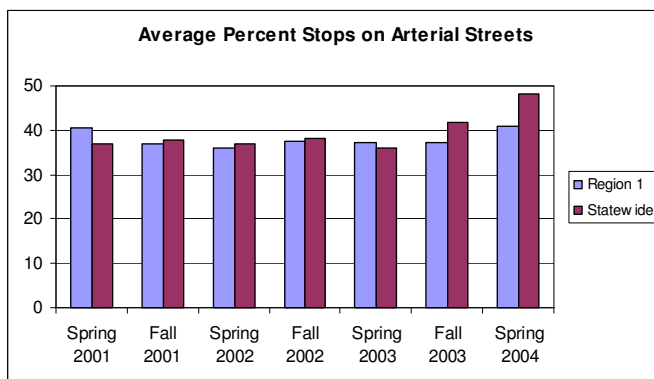
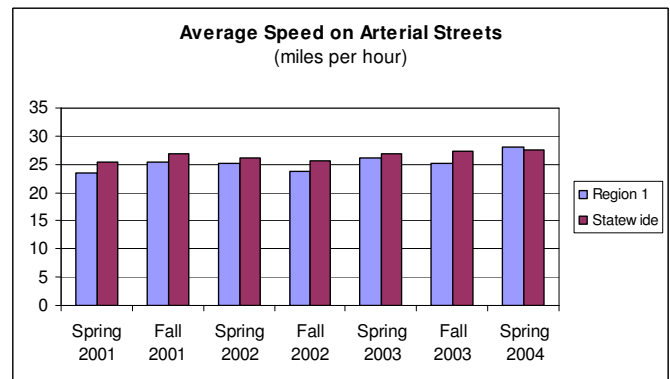
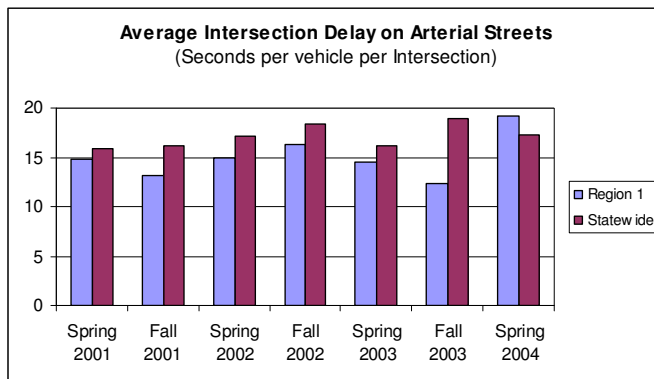
The 5 links with the highest average Travel Time Index for the month are:

Segment	Period	Avg Of TTI
I-215 S WB from Knudsen's Corner to I-15	AM Peak	1.45
I-15 NB from 4500 S to 2100 S	PM Peak	1.19
SR-201 WB from I-15 to I-215 W	PM Peak	1.18
I-15 SB from 4500 S to I-215 S	PM Peak	1.10
I-15 SB from 10600 S to Point-of-the-Mountain	PM Peak	1.09

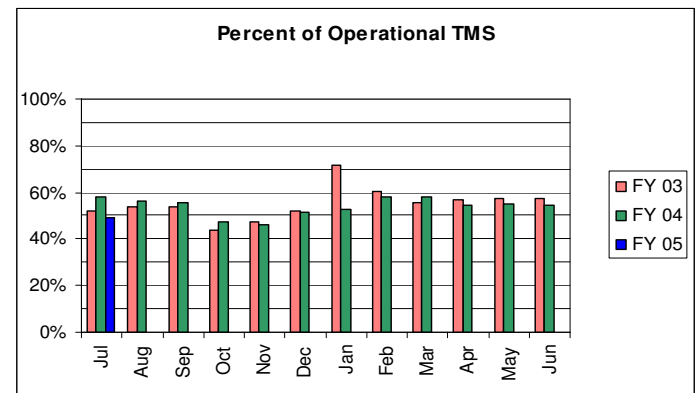
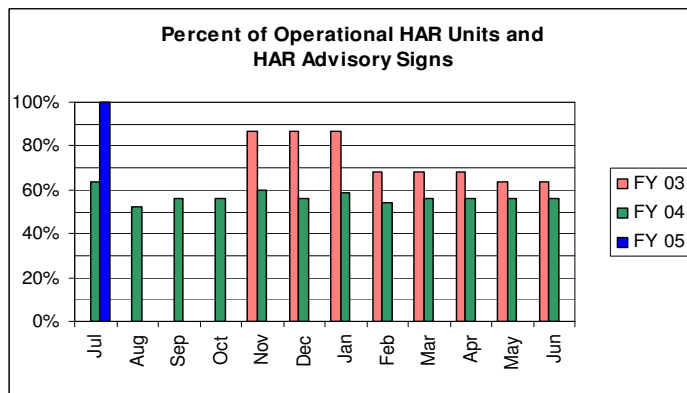
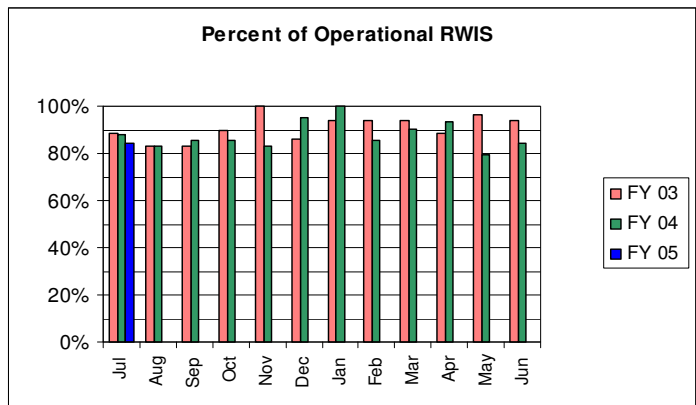
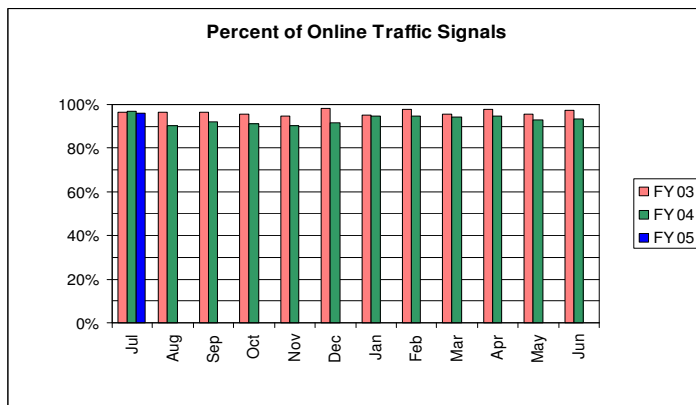
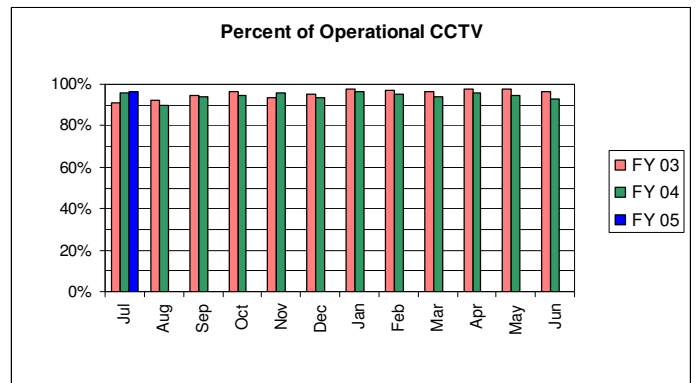
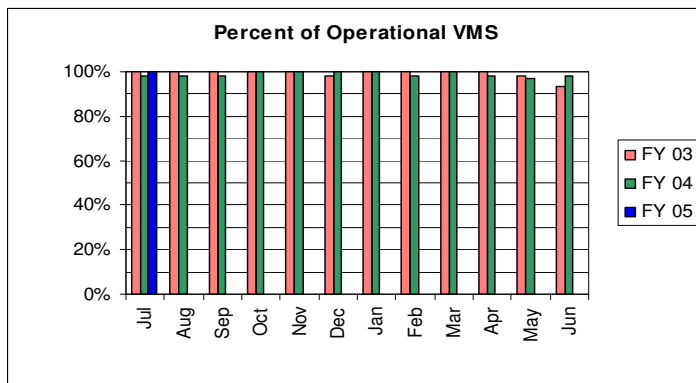
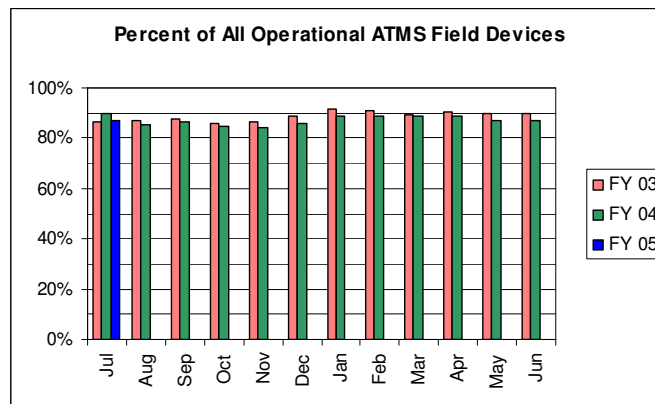
Surface Street Traffic Level of Service

The surface street traffic statistics are generated through a series of Travel Time measurements. These are conducted using a special equipped vehicle which measures the average travel time, the average percent of intersections at which a vehicle must stop, the average time stopped at an intersection, and the average speed. The Traffic Systems Section gathers these measurements from Regions 1, 2, 3, and 4 twice each year. The chart in the lower right hand corner shows the number of incidents where traffic signal timing was modified in order to help traffic flow around closed lanes, or to help relieve excessive congestion.

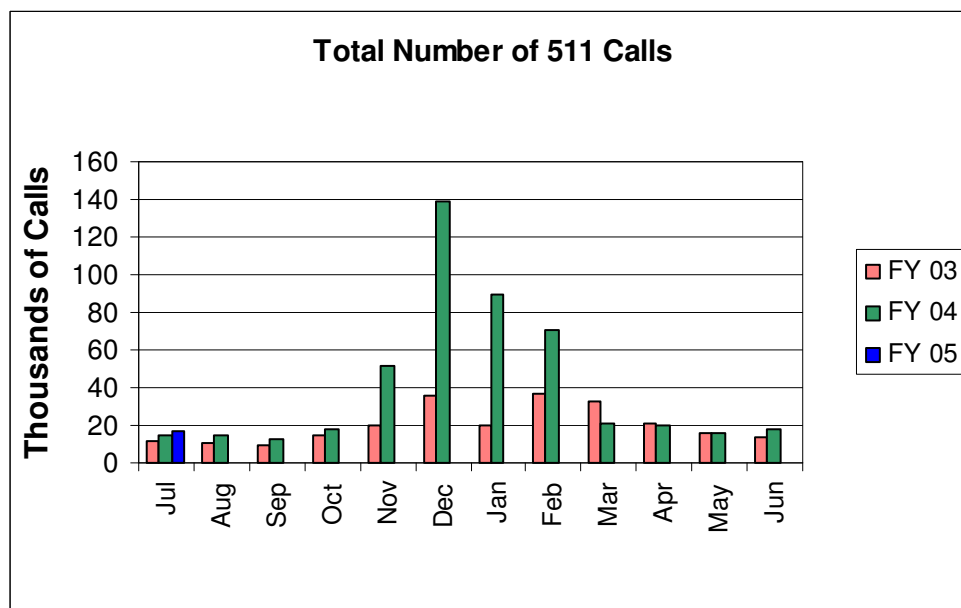
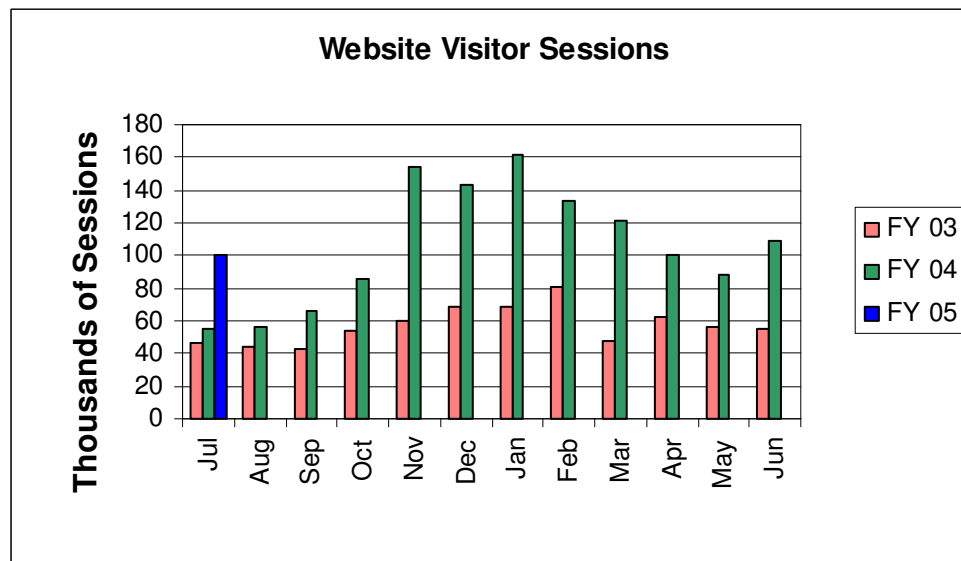
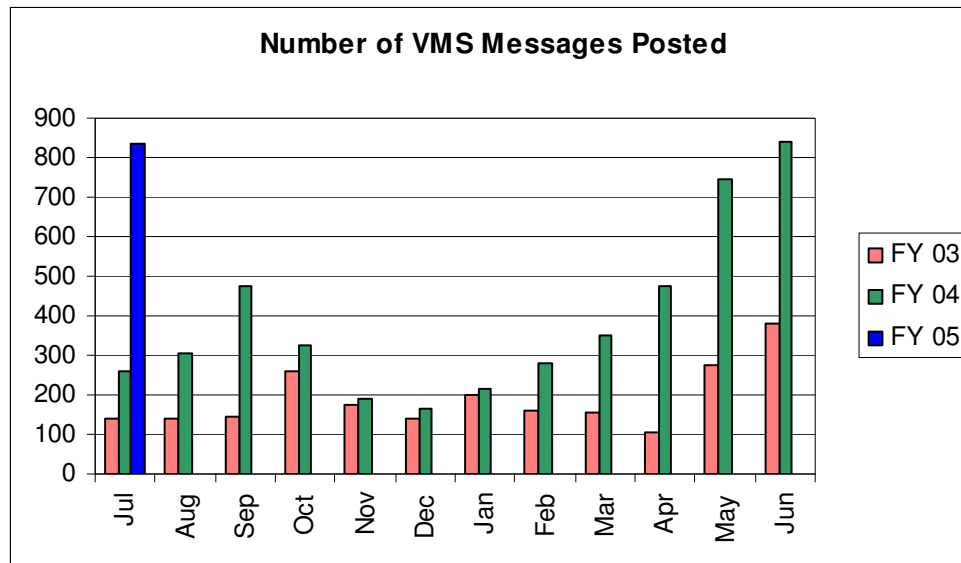
Since the data is gathered semi-annually, each month this report will provide charts for a Region compared to the Statewide Average. The charts below represent Region 1 compared to the Statewide Average.



Maintenance

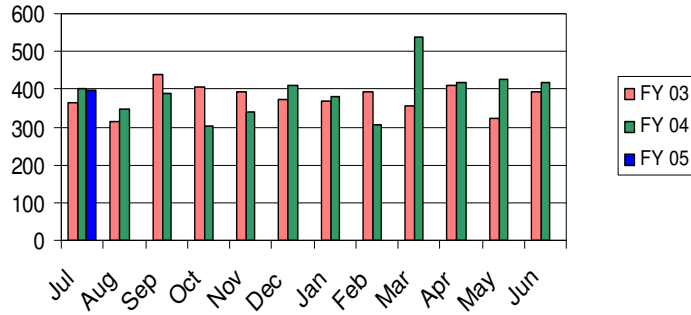


Traveler Information

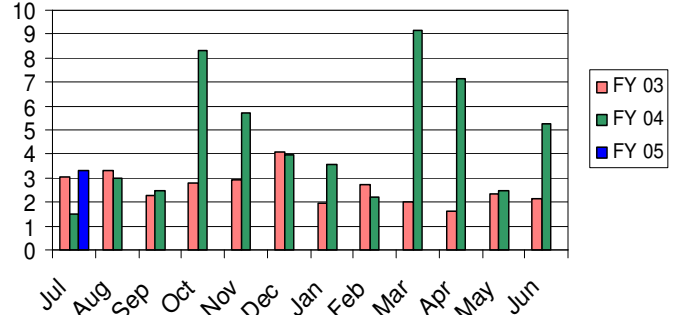


Customer Service

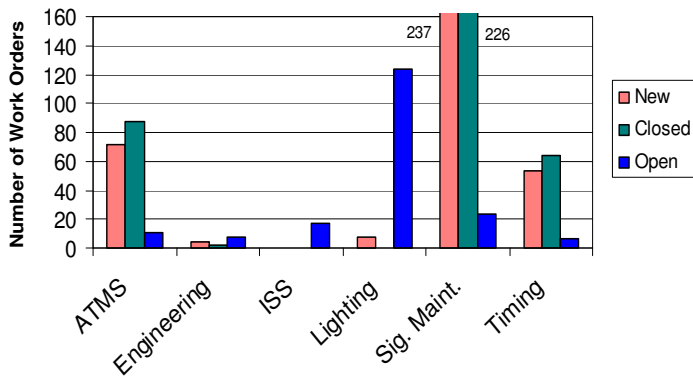
Number of New Work Orders



Overall Average Work Order Turnaround Days



Work Order Status by Group



Work Order Status for All Groups for FY05

